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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/045,927	01/09/2002	Thomas B. Berg	BEA920000017US1	3067

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IBM CORPORATION  
IP LAW DEPT, ED02-905  
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BEAVERTON, OR 97006-6063

EXAMINER

MOAZZAMI, NASSER G

ART UNIT	PAPER NUMBER
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2187

DATE MAILED: 03/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/045,927

Applicant(s)

BERG ET AL

Examiner

Nasser G Moazzami

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 February 2004.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Amendment*

1. This Office Action is in response to applicant's amendment dated 02/18/2004 in response to PTO Office Action dated 10/29/03. The applicant's remarks and amendment were considered with the results that follows.
2. Claims 1-9 have been presented in this application for examination. No claims has been canceled or added. Therefore, claims 1-9 remain pending in the application.
3. Objection to claim 3 under minor informalities are withdrawn due to the correction by applicant.

### *Response to Arguments*

4. Applicant's arguments filed 02/18/2004 have been fully considered but they are not persuasive. In response to applicant's arguments, examiner refer the applicant to the followings:

Contrary to applicant's arguments, Luick clearly discloses a plurality of nodes that are connected together by an interconnecting pathway [**see nodes 101, interconnect bus 124, and GCU 123 of figure 1**], wherein the interconnecting pathway stores information regarding the state of data [**the**

**global coherence table indicates that the data is being shared and also indicates where the most current data resides (see column 2, lines 50-54)].**  
Interconnect monitoring device monitors communication between the nodes and detects transfers of data from one node to another **[column 2, lines 46-48].**

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Luick et al., hereinafter Luick (U.S. Patent No. 6,088,769).

As for claims 1-2, 4-5, and 7-8, Luick discloses a method for maintaining cache coherence **[maintaining coherence between memories (column 1, line 9)]** in a multiprocessor system having a plurality of nodes **[nodes 101 (see Fig. 1)]** coupled by an interconnecting communications pathway **[global coherence unit 123 (see Fig. 1)]** which is capable of storing information regarding the location and state of data within the system **[global coherence table 129 indicate the most current copy of data and where it is reside (column 2, lines 50-54)]**, each node having at least one cache **[cache 115 and cache 117**

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(see Fig. 1)], a memory device local to the node [memory 105 (see Fig. 1)], and at least one processor device [processor 103 (see Fig. 1)], the processor device within each node being capable of accessing data from the local memory device, the local cache, or over the interconnecting communications pathway from a non-local memory device or a non-local cache [communication between the nodes and transfer of data from one node to another (column 2, lines 46-48)], the method comprising: storing information regarding the state of data in said interconnecting pathway; checking said stored information to determine the location of the most current copy of a requested portion of data, in response to a request by a requesting node for the requested portion of data [the global coherence table indicate the data is being shared and also where the most current copy of the data is resided (column 2, lines 50-54)]; retrieving said current copy of requested portion of data and directing said data to the requesting node [transferring the data from a first node to a second node (column 2, lines 58-59)]; checking said stored information to determine the location of the requested data [global coherence table preferably indicates the location of data (column 2, lines 52-55)]; and directing the system to send said requested data to the requesting node without going through the said interconnecting communications pathway node [transferring the data from a first node to a second node (column 2, lines 58-59)].

As for claim 3, Luick discloses that each node includes memory [local caches 115, 117, and local memory 105 (see Fig. 1)] accessible to it without

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communications through said communications pathway [**checking local caches or local memory for the requested data (see Fig. 3, steps 301 through 309)**], and memory accessible remotely by others of the nodes [**sending the request to other nodes (see Fig. 3, steps 313 through 321)**].

As for claim 6, Luick discloses a dispatch buffer [**cache controller 113 (see Fig. 1)**].

### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nasser G Moazzami whose telephone

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number is (703) 305-0017. The examiner can normally be reached on 7:00AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on (703) 308-1756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**NASSER MOAZZAMI**  
**PRIMARY EXAMINER**

03/12/2004